

Abstract

A catalytic cellulignin fuel obtained by a biomass pre-hydrolysis process and that is composed of cellulose and globulized lignin with a specific surface of about $1.5 - 2.5 \text{ m}^2/\text{g}$. The cellulignin fuel may be ground down to particles smaller than $250\mu\text{m}$ and has a combustion heat value that can reach up to 18 - 20 MJ/kg and an ignition time equal to or shorter than 20 ms (0.02s).